



# UNITED STATES PATENT AND TRADEMARK OFFICE

*CV*  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/787,659	05/07/2001	Markku Verkama	P-279243	5974

7590 02/22/2007  
PILLSBURY WINTHROP LLP  
1600 TYSONS BOULEVARD  
MCLEAN, VA 22102

EXAMINER
----------

JUNTIMA, NITTAYA

ART UNIT	PAPER NUMBER
----------	--------------

2616

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/22/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/787,659	VERKAMA ET AL.	
	Examiner	Art Unit	
	Nittaya Juntima	2616	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 November 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 and 5-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. This action is in response to the Amendment filed on 11/15/2006.
2. Claim 4 was cancelled.
3. Claims 1-3 and 5-17 are pending.
4. Claims 2, 3, and 9-17 are presently rejected under 35 U.S.C. 112, second paragraph.
5. Claims 1-3 and 5-17 are presently rejected under 35 U.S.C. 103(a).

### *Claim Objections*

6. Claims 1, 6, 9, 12, and 15-17 are objected to because of the following informalities:

- in claim 1, line 5, "GGSN" and "SGSN" should be spelled out to avoid any misinterpretation;

- in claim 6, line 2, "an access node" should be changed to "the SGSN node"  
line 3, "a gateway node" should be changed to "the GGSN node"  
for terminology consistency purposes;

- in claim 9, line 3, "an" should be changed to "a";  
lines 3 and 4, "GGSN" and "SGSN" should be spelled out to avoid any misinterpretation;

- in claim 12, line 7, "GGSN" and "SGSN" should be spelled out to avoid any misinterpretation;

- in claims 15-17, line 2, a comma should be removed.

Appropriate correction is required

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-3 and 5-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In **claim 1**, line 8, **claim 9**, line 10, and **claim 12**, lines 8 and 9, the limitation “a request for a service from the foreign agent” is vague and indefinite. It is unclear how the access point name from the mobile station sent to the GGSN node or SGSN node indicates a request for a service from the foreign agent. In addition, this limitation is not supported in the specification (paragraph 0028 discloses that the APN is used for requesting the services of a particular gateway node, i.e., the GGSN). The Office is treating the limitation as “a request for a service from the GGSN node.”

In claim 2, line 1, “the first support node” lacks antecedent basis. The Office is treating “the first support node” as “the SGSN.”

In claim 3, line 1, “the first support node” lacks antecedent basis.

In claim 9, line 5, the limitation “at least one of the SGSN and GGSN nodes” is vague and indefinite. It cannot be determined as how a foreign agent can be integrated into both of the SGSN and GGSN nodes in the same network since “at least one” includes both of the nodes.

Art Unit: 2616

Moreover, the limitation is not supported by the specification; Figs. 1 and 3 show a FA integrated into either a SGSN or a GGSN, not both.

In claim 10, line 2, "the access node" lacks antecedent basis. The Office is treating "the first support node" as "the SGSN."

In claim 11, line 2, "the gateway node" lacks antecedent basis.

### **Claim Rejections - 35 USC § 103**

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-2, 5-6, 8-10, 12, and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu (US 6,396,828 B1) in view of the admitted prior art (hereinafter "APA"), and further in view of Forslow (US 6,937,566 B1).

Regarding claims 1 and 12, as shown in Fig. 5, Liu teaches a method for providing Internet Protocol mobility service for a mobile station (MS 20) in a packet radio network (a packet radio network reads on elements 27, 28, 29, 30, 31, 60, and 24, collectively) the method comprising:

Coupling the packet radio network to a data network (data network 16 which is the Internet) implementing IP (col. 8, ll 50-54).

Installing into the packet radio network a foreign agent (FA 23) having an IP address (col. 4, ll 8-20 and col. 8, ll 30-36).

Providing a care-of-address for the mobile station (col. 4, ll 15-20 and col. 10, ll 38-43) by using the IP address of the foreign agent as the mobile station's care-of-address (col. 4, ll 8-20 and col. 9, ll 38-43).

Liu also teaches integrating the foreign agent (FA 23) into a support node (the mobility support node 60 having a PPP server 21 and ASM integrated with FA) included in the radio packet network (col. 8, ll 30-36). However, Lie fails to explicitly teach that (i) the support node is a SGSN node and that (ii) a GGSN or SGSN node receiving an access point name, which indicates a request for a service from the GGSN, from the mobile station.

Regarding (i), the APA teaches that the GPRS comprises two support nodes such as a GGSN for connecting an operator's GPRS network to external system such as an IP network or Internet and a SGSN for registering the new MSs (paragraphs 0007-0009). Therefore, since Liu also teaches that GPRS, which was being standardized at the time of Liu's invention, can be used for accessing data networks such as Internet from the GSM system (col. 1, ll 27-39), the GSM system is connected to the Internet 26 in Fig. 5 (col. 8, ll 21-25), and the mobility support node 60 having ASM 22 is for registering the MS 20 and a router 24 is for connecting node 60 to Internet 26 in Fig. 5 (col. 8, ll 30-57 and col. 8, ll 62-65), it would have been obvious to one skilled in the art at the time of the invention to modify the teaching of Liu by including the support nodes such as a GGSN and a SGSN such that the step of integrating the foreign agent into a SGSN node including in the packet radio network would be included as claimed. The suggestion/motivation to do so would have been to implement the mobility support node 60 as the SGSN when the GPRS later became standardized at the time of the invention. Moreover,

Art Unit: 2616

such integration of functionalities of a node/a node into another node involves only routine skill in the art.

Regarding (ii), as shown in Fig. 6; Forslow teaches that the SGSN receives an access point name (APN) from the mobile station and forwards to the GGSN, the APN must indicate a request for a service from the GGSN as known in the art (col. 8, ll 52-62 and col. 9, ll 7-16). Given the teaching of Forslow, it would have been obvious to one skilled in the art at the time of the invention to modify the combined teaching of Lie and APA to include a GGSN or SGSN node receiving an access point name, which indicates a request for a service from the GGSN, from the mobile station as recited in the claim. The suggestion/motivation to do so would have been to include the APN in the activate PDP context request message for forwarding of IP packets between the MS and the ISP (Forslow, Fig. 6 and col. 8, ll 45-65 and col. 9, ll 22-24).

Regarding claim 2, the APA teaches that the SGSN is an access node (paragraphs 0007-0008).

Regarding claims 5 and 16, the combined teaching of Liu and APA does not teach receiving the APN from the mobile station in connection with an attach procedure.

However, Forslow teaches the step of receiving the APN from the mobile station in connection with an attach procedure (col. 3, ll 14-37 and col. 8, ll 19-23 and 52-65).

Given the teaching of Forslow, it would have been obvious to one skilled in the art at the time of the invention to include the step of receiving the APN from the mobile station in connection with an attach procedure into the combined teaching of Liu and APA. The suggestion/motivation to do so would have been to establish a packet session as taught by Forslow (col. 5, ll 32-35).

Regarding claim 6, the combined teaching of Liu and APA does not teach that the APN is received by the SGSN and the method further comprises sending the APN received from the mobile station to a GGSN.

However, as shown in Fig. 6, Forslow teaches that the APN is received by the SGSN (50) and the method further comprises sending the APN received from the mobile station to a GGSN (54) (col. 8, ll 52-col. 9, ll 1-16).

Given the teaching of Forslow, it would have been obvious to one skilled in the art at the time of the invention to include that the APN is received by the SGSN and the method further comprises sending the APN received from the mobile station to a GGSN into the combined teaching of Liu and APA. The suggestion/motivation to do so would have been to enable the GGSN to select a predefined tunnel or bearer for the selected access point name (Forslow, col. 9, ll 22-24 and 29-31).

Regarding claims 8 and 14, Liu teaches receiving information from the mobile station indicating whether the mobile station requests use of the IP mobility service (the information reads on the information of the registration with the ASM of mobility support node 60 in Fig. 5 for semi-connection service or semi-dial-up service) and the receiving information is performed in connection with mobile station registration (the mobile station is registered with the ASM) (col. 9, ll 14-22, see also col. 7, ll 32-36).

Regarding claims 9 and 10, as shown in Fig. 5, Liu teaches an arrangement for providing IP mobility service for a mobile station (MS 20), the arrangement comprising:

At least two support nodes (ASM 22 integrated with FA 23 and a router 24). See col. 8, ll 30-36.



A foreign agent (FA 23) having an IP address (FA1, col. 9, ll 38-43, see also col. 4, ll 15-20) being integrated into one of the support nodes (FA is integrated with ASM 22, col. 8, ll 30-36).

Wherein, the IP address of the foreign agent is also the mobile's care-of-address (col. 9, ll 38-43, see also col. 4, ll 15-20).

However, Liu fails to teach that (i) at least one support node is a SGSN node and at least one support node is a GGSN node and the foreign agent being integrated into the SGSN node, and (ii) the support node comprising means for receiving an access point name from the mobile station, the access point name indicating for a service from the GGSN node.

Regarding (i), the APA teaches that the GPRS comprises two support nodes such as a GGSN for connecting an operator's GPRS network to external system such as an IP network or Internet and a SGSN for registering the new MSs (paragraphs 0007-0009). Therefore, since Liu also teaches that GPRS, which was being standardized at the time of Liu's invention, can be used for accessing data networks such as Internet from the GSM system (col. 1, ll 27-39), the GSM system is connected to the Internet 26 in Fig. 5 (col. 8, ll 21-25), and the ASM 22 is for registering the MS 20 and a router 24 is for connecting node 60 to Internet 26 in Fig. 5 (col. 8, ll 30-57 and col. 8, ll 62-65), it would have been obvious to one skilled in the art at the time of the invention to modify the teaching of Liu by including the support nodes such as a GGSN and a SGSN such that at least one support node would be a SGSN and at least one support node would be a GGSN and that the step of integrating the foreign agent into a SGSN node would be included as claimed. The suggestion/motivation to do so would have been to implement the ASM 22 as the SGSN and utilize the support nodes of the GPRS, i.e., SGSN and the GGSN,

Art Unit: 2616

when the GPRS later became standardized at the time of the invention. Moreover, such integration of functionalities of a node/a node into another node involves only routine skill in the art.

Regarding (ii), as shown in Fig. 6, Forslow teaches that the support node, i.e., SGSN, receives an access point name (APN) from the mobile station and forwards to the GGSN, the APN must indicate a request for a service from the GGSN as known in the art (col. 8, ll 52-62 and col. 9, ll 7-16). Given the teaching of Forslow, it would have been obvious to one skilled in the art at the time of the invention to modify the combined teaching of Lie and APA to include the support node, i.e., SGSN node, comprising means for receiving an access point name, which indicates a request for a service from the GGSN, from the mobile station as recited in the claim. The suggestion/motivation to do so would have been to include the APN in the activate PDP context request message for forwarding of IP packets between the MS and the ISP (Forslow, Fig. 6 and col. 8, ll 45-65 and col. 9, ll 22-24).

Regarding claims 15 and 17, the combined teaching of Liu and APA does not teach the step of receiving the access point name from the mobile station in connection with a packet data protocol context activation request.

However, as shown in Fig. 6, Forslow teaches the step of receiving the access point name (APN) from the mobile station (MS) in connection with a packet data protocol context activation request (an activate PDP context request message) (col. 8, ll 52-65).

Given the teaching of Forslow, it would have been obvious to one skilled in the art at the time of the invention to include the step of receiving the access point name from the mobile station in connection with a packet data protocol context activation request into the combined

Art Unit: 2616

teaching of Liu and APA. The suggestion/motivation to do so would have been to establish a network layer bearer between the mobile station and the GGSN as taught by Forslow (col. 8, ll 20-23).

11. Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu (USPN 6,396,828 B1) in view of in view of the admitted prior art (hereinafter "APA"), and further in view of Forslow (US 6,937,566 B1) and Frid (US 6,137,791).

Regarding claims 7 and 13, although Liu teaches a Home Location Register (HLR 29 in Fig. 5) of the packet radio network (a packet radio network reads on elements 27-24, collectively) and further teaches a HASA (col. 8, ll 36-43), the combined teaching of Liu, APA, and Forslow fails to explicitly teach storing information concerning whether the mobile station in question is allowed to use the IP mobility service in the HLR.

Frid teaches that the subscription data of a mobile station is maintained by a HLR (col. 1, ll 57-66), the HLR is used by a GLR to authenticate the mobile station for voice call connection and the subscription data must be used also by the GLR for providing authentication for the packet data connection as well (col. 8, ll 41-col. 9, ll 21, see also col. 11, ll 42-66).

Given the teaching of Frid on storing subscription information of the mobile station in the HLR and using the HLR and the subscription information to authenticate the voice/packet connection, it would have been obvious to one skilled in the art to modify the teaching of combined teaching of Liu, APA, and Forslow to include storing information concerning whether the mobile station in question is allowed to use the IP mobility service in the HLR as recited in the claim. The motivation/suggestion to do so would have been to enable the mobile station to

Art Unit: 2616

enter the packet mode after being authorized to utilize packet communication as taught by Frid (col. 9, ll 17-21).

*Conclusion*

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nittaya Juntima whose telephone number is 571-272-3120. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nittaya Juntima  
February 16, 2007

NS



HUY D. VU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600